

Steve Adcock



**Vector Ring &
Resource Evaluations**

PRESENTING...

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**TECHNOLOGY
RISING**

Welcome to the **SINGULARITY**

The Exponential Growth of Technology



The light at the end of the tunnel



Deer in the Headlights?



Take **CHARGE** of **DISRUPTIVE** Technology!!!



WHO



• RESOURCE EVALUATIONS

- Drone Geophysical Acquisition & Interpretation
- Interpretation Software
- Interpretation Services

• VECTOR RING

- SMASIS Research and IP
- Prototyping & Development

SMASIS

- **S**mart **M**aterials
- **A**ctivated **S**tructures
- **I**ntelligent **S**ystems

PRINCIPALS



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Technologies



• RESOURCE EVALUATIONS

- Drones – UAVs
 - Photogrammetry
 - Magnetics
 - Gravity, Seismic
- Geophysical Software
 - OpendTect & ArkCLS
- Turnkey Interpretation

• VECTOR RING

- 3D Printing and Prototyping
- UAV command and control
- Smart Materials

Products



• RESOURCE EVALUATIONS

- UAV Acquisition
 - Photogrammetry
 - Maps >> Creekology!
 - Magnetics
 -Gravity, Seismic
- OpendTect and ArkCLS
- Turnkey Interpretation

• VECTOR RING

- Smart Material Clamps (Vector Ring)
- Rotary Motors (Boeing)

Our Market



- **RESOURCE EVALUATIONS**

- Oil & Gas Exploration
- Energy Independents
- Resource Asset Owners & Managers

- **VECTOR RING**

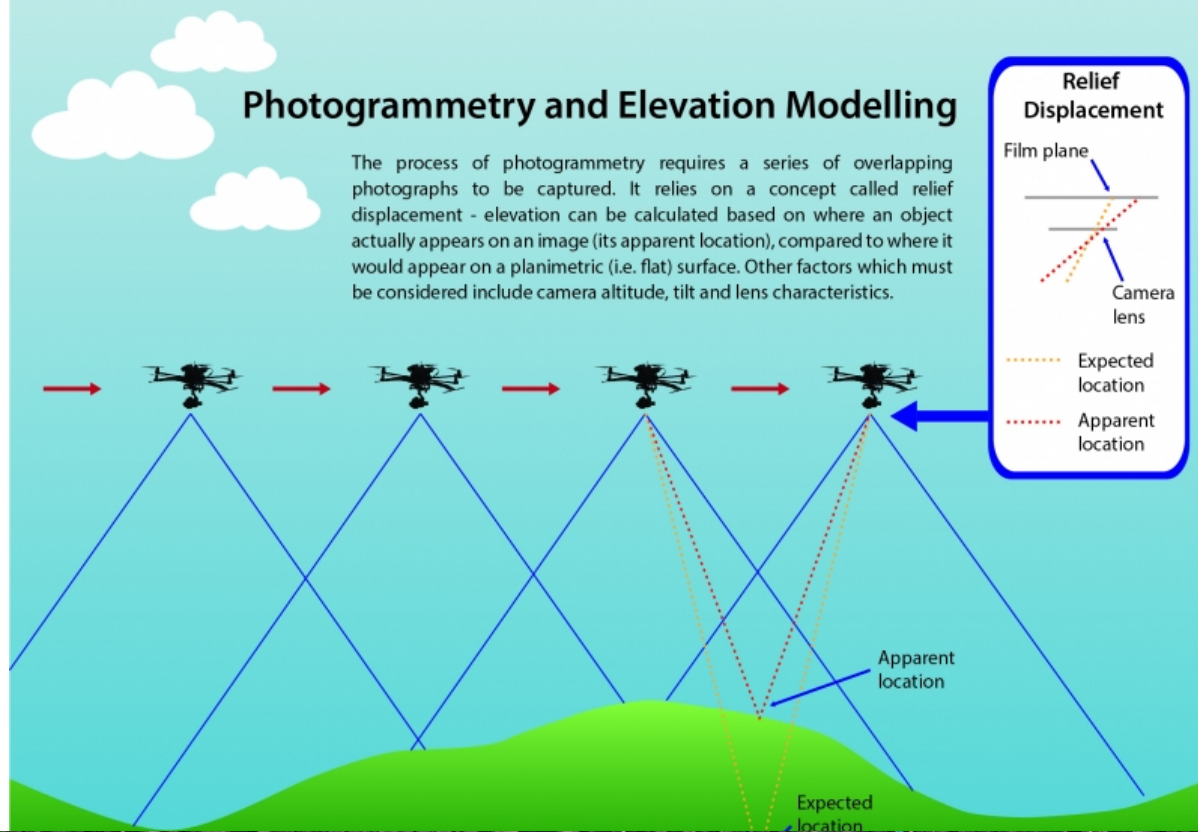
- Technology Start Ups
- Inventors
- STEM Educators

Photos to Photogrammetry (Flood Control)

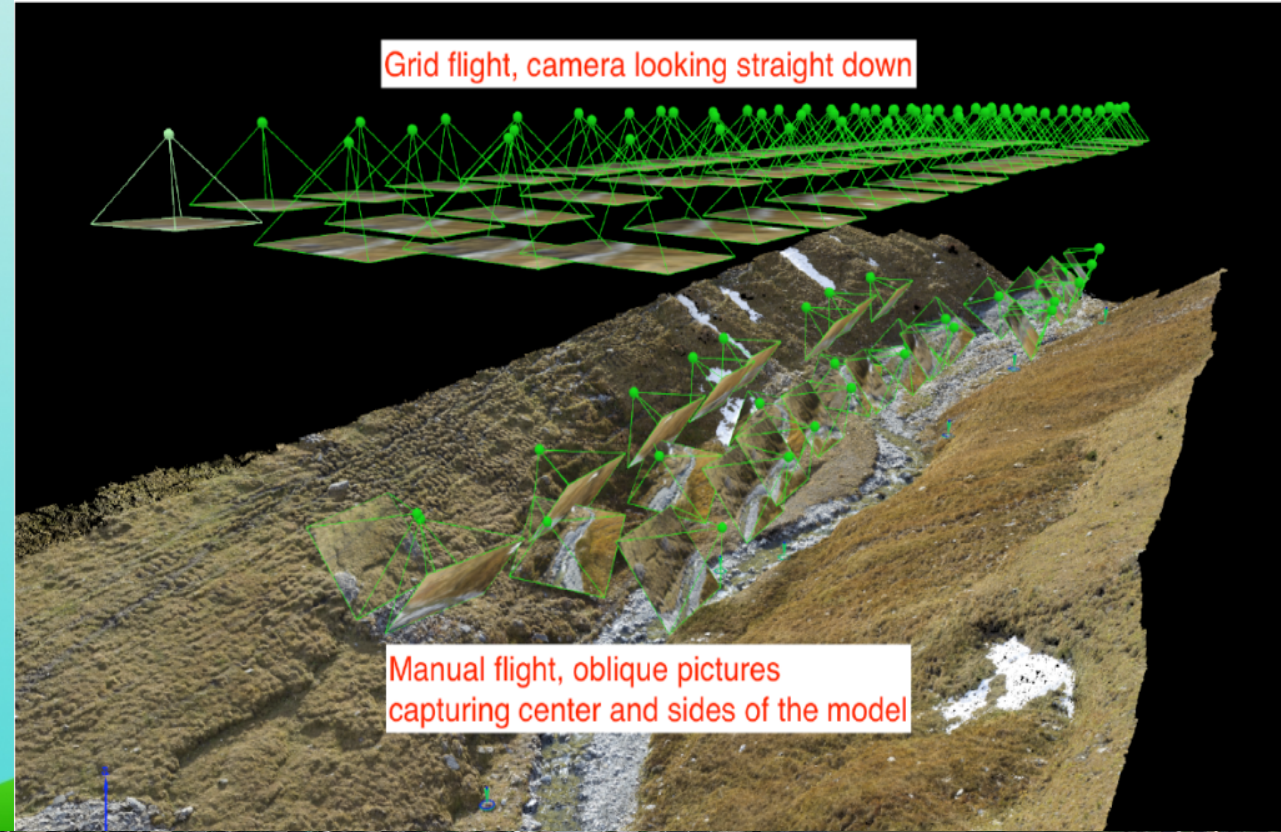
Photogrammetry and Elevation Modelling

The process of photogrammetry requires a series of overlapping photographs to be captured. It relies on a concept called relief displacement - elevation can be calculated based on where an object actually appears on an image (its apparent location), compared to where it would appear on a planimetric (i.e. flat) surface. Other factors which must be considered include camera altitude, tilt and lens characteristics.

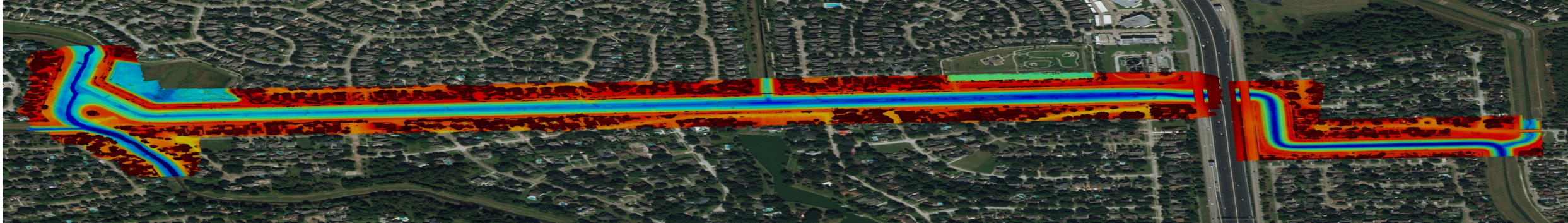
Relief Displacement



Grid flight, camera looking straight down



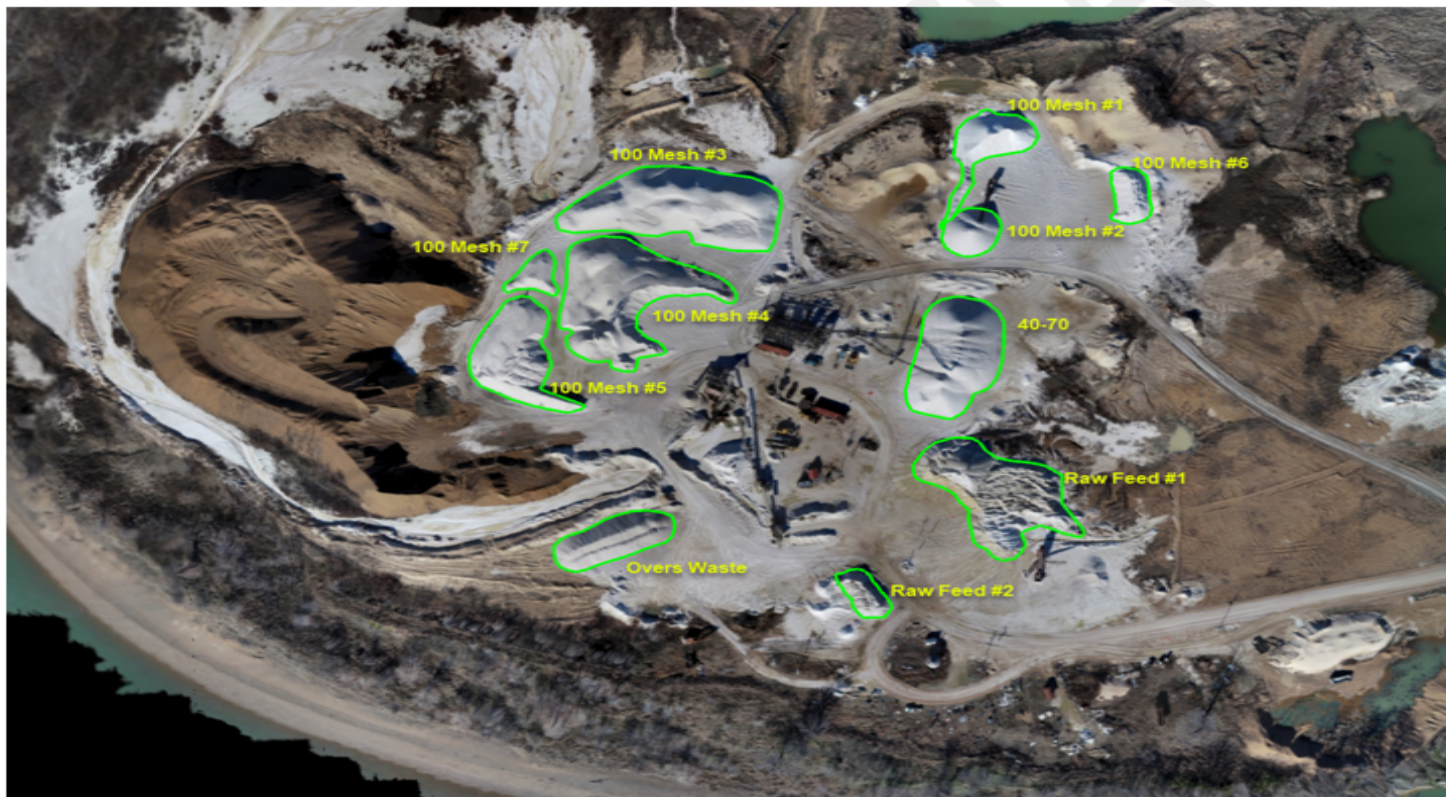
Manual flight, oblique pictures capturing center and sides of the model



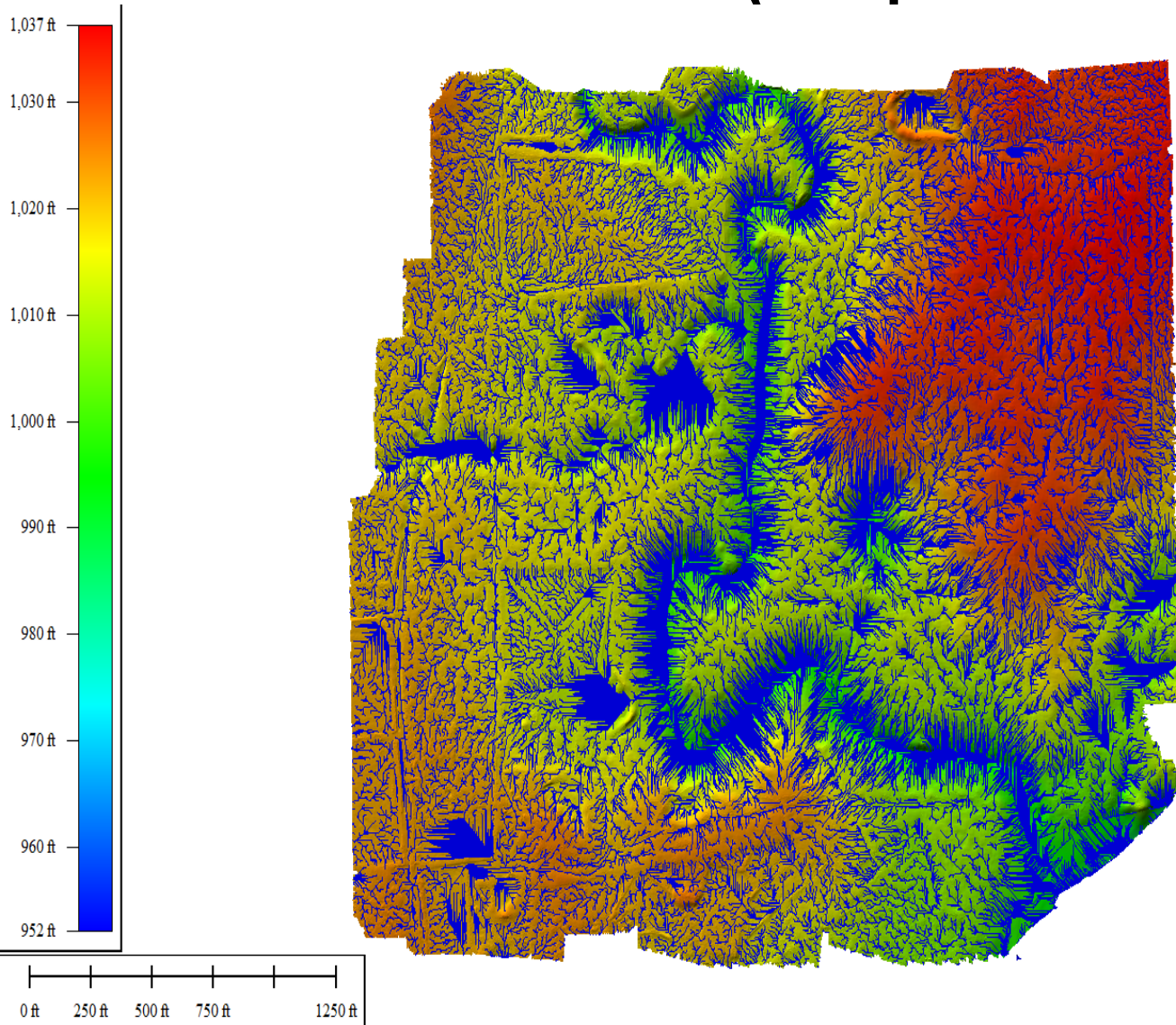
Volumetrics (Asset Management)

Stockpile	Area (sq. ft.)	Volume (cu. Ft.)	Volume (cu. yd.)	Tons	Reference	Totals
100 Mesh #1	8,065.00	59,898.00	2,218.44	2,839.61	Flat 234	
100 Mesh #2	4,659.00	38,485.00	1,425.37	1,824.47	3D Polygon	
100 Mesh #3	28,285.00	300,798.00	11,140.66	14,260.04	3D Polygon	
100 Mesh #4	26,584.00	209,555.00	7,761.29	9,934.45	3D Polygon	
100 Mesh #5	14,729.00	102,148.00	3,783.26	4,842.57	3D Polygon	
100 Mesh #6	3,854.00	25,926.00	960.22	1,229.08	Flat Minimum	
100 Mesh #7	3,042.00	10,824.00	400.89	513.14	3D Polygon	
40-70	18,832.00	228,076.00	8,447.25	10,812.48	3D Polygon	
Overs Waste	9,288.00	61,665.00	2,283.89	2,923.37	3D Polygon	
Raw Feed #1	22,397.00	175,959.00	6,516.99	8,341.75	3D Polygon	
Raw Feed #2	3,375.00	16,190.00	599.63	767.53	3D Polygon	
						9,109.28

100 Mesh #3	28,285.00	300,798.00	11,140.66	14,260.04
100 Mesh #4	26,584.00	209,555.00	7,761.29	9,934.45
100 Mesh #5	14,729.00	102,148.00	3,783.26	4,842.57
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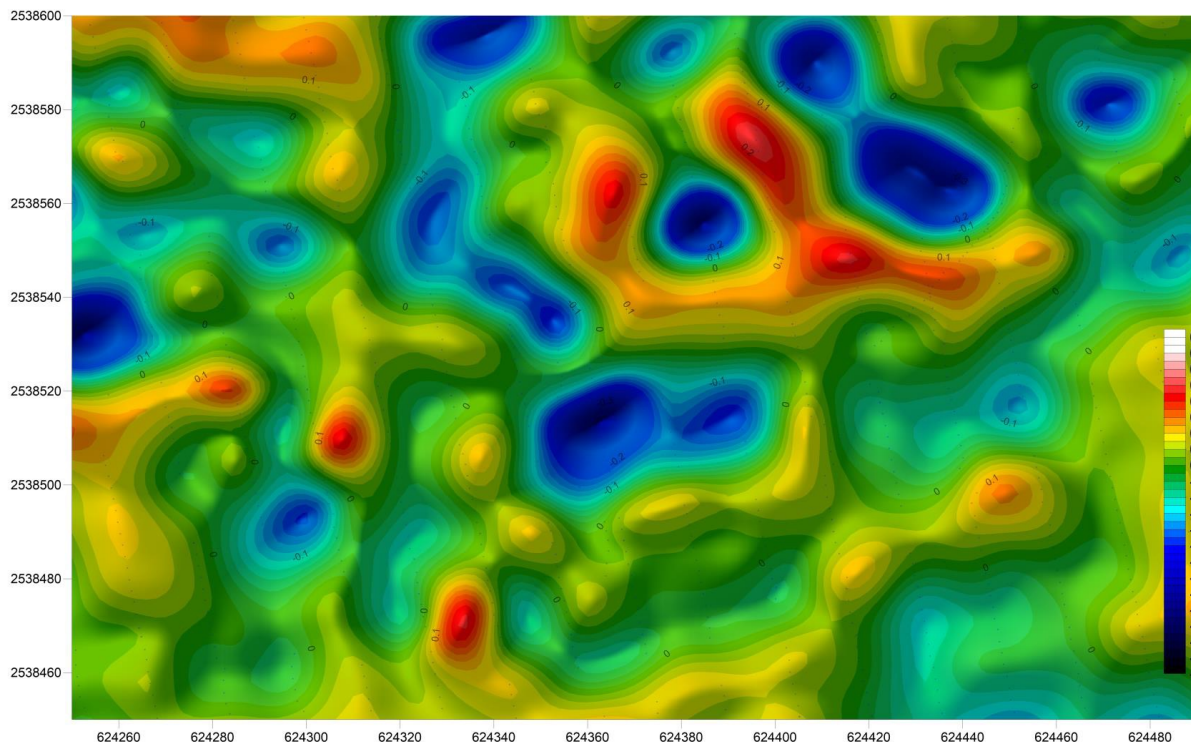
New Age Creekology! (Exploration)



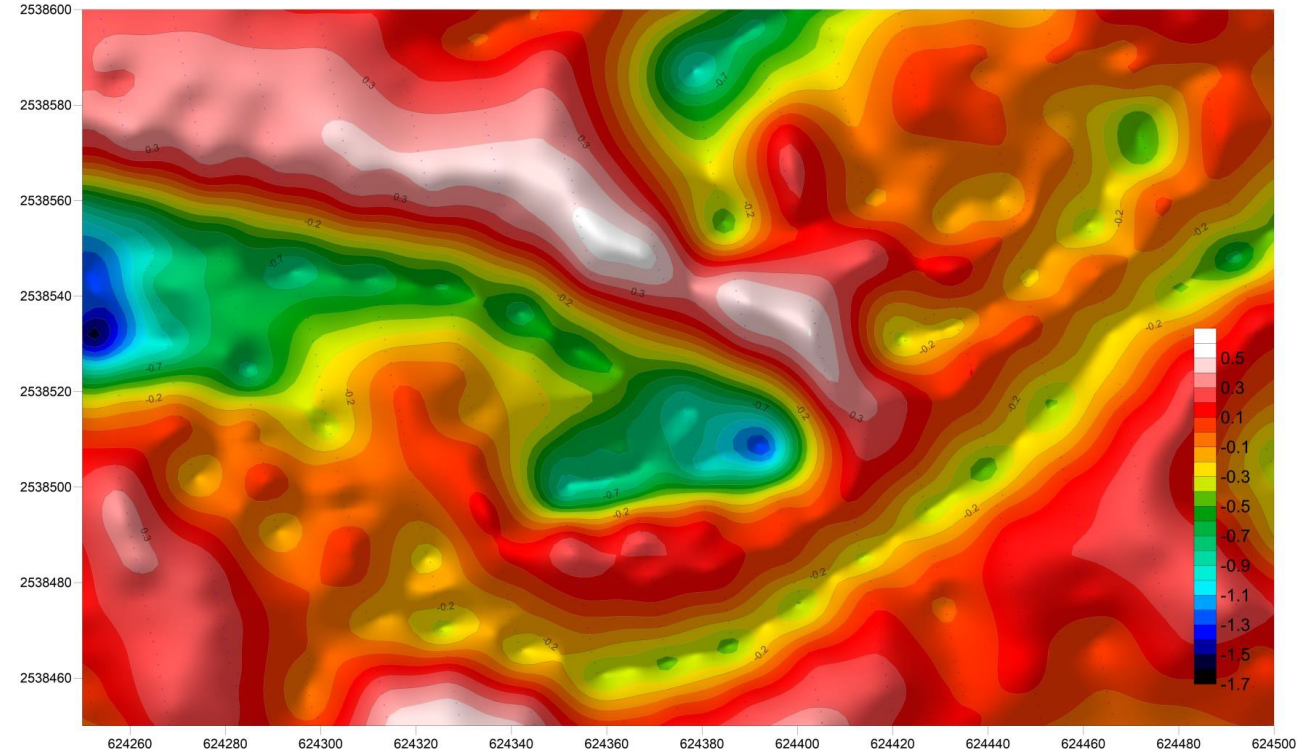
Prototyping a UAV Magnetometer



Gravity to Microgravity



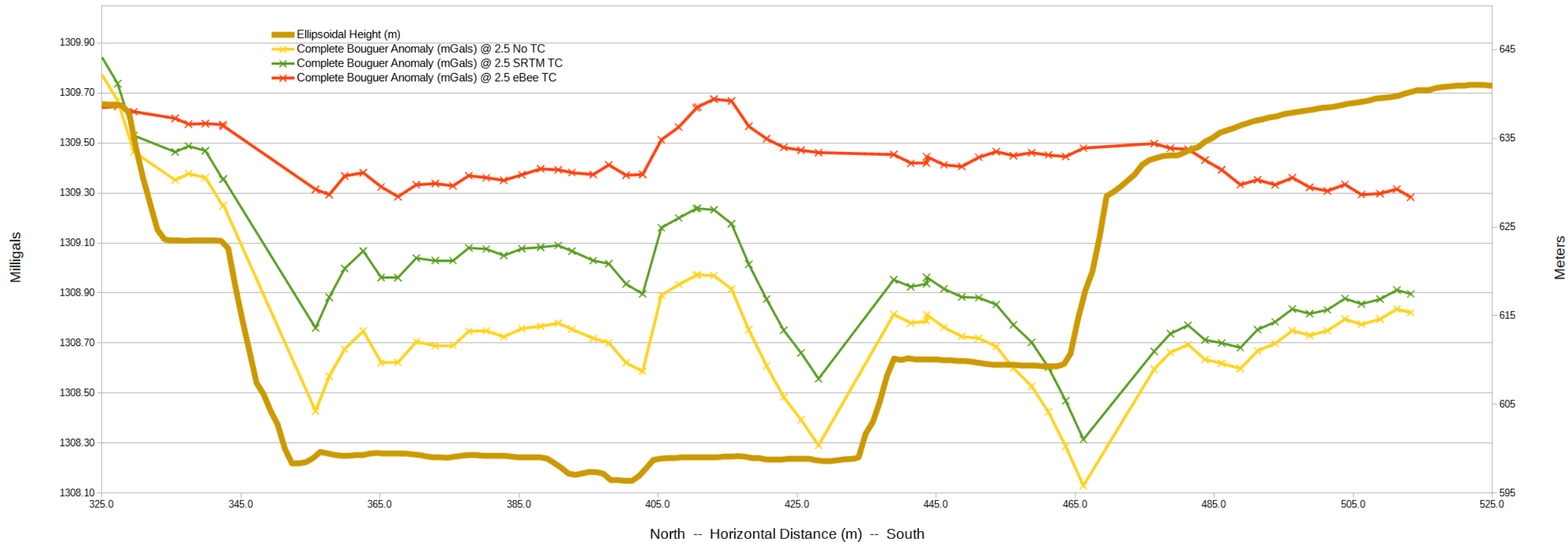
Drone corrected Elevations



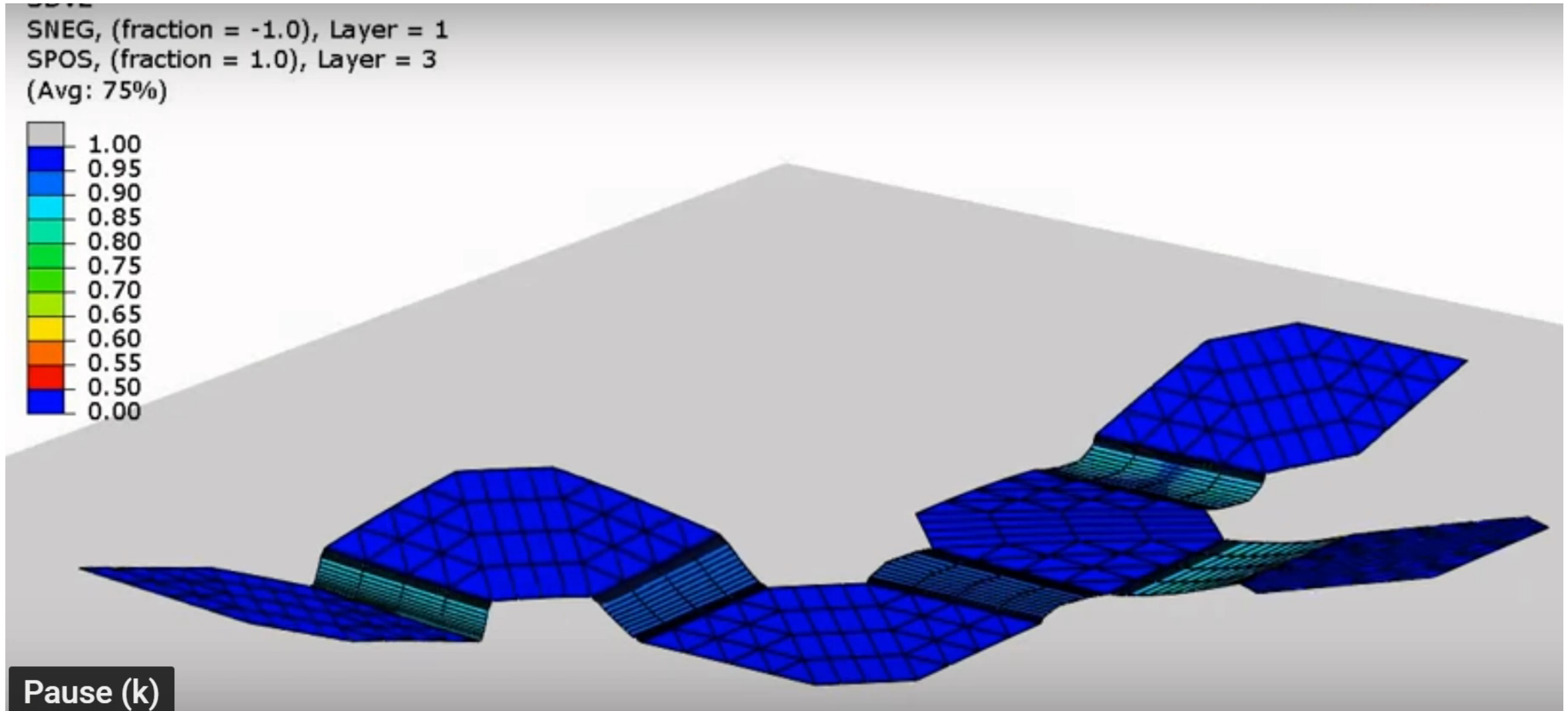
Residual Gravity – no terrain correction

Gravity with Drone Terrain Correction

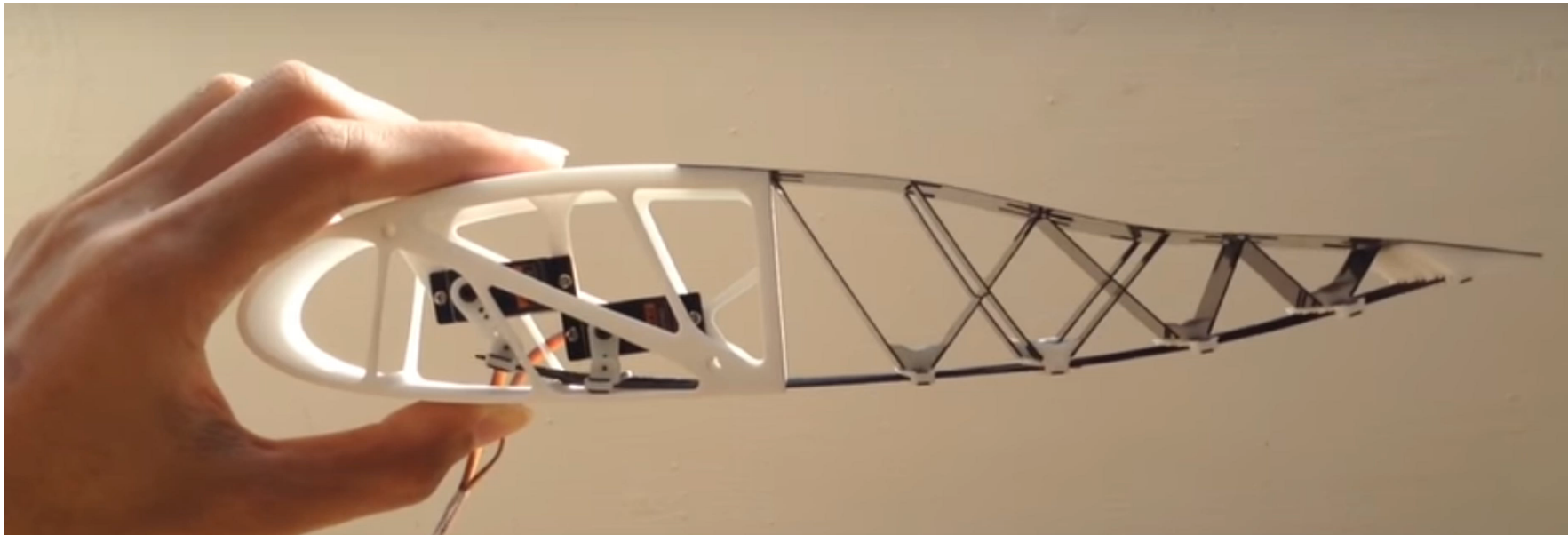
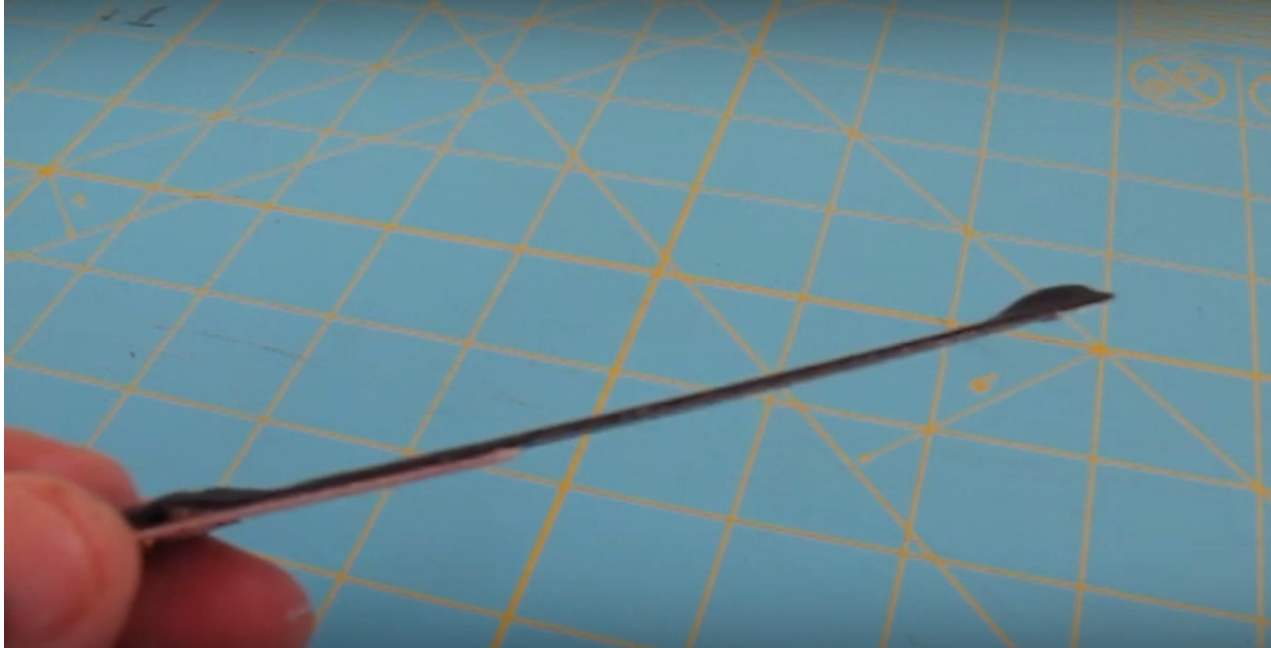
Line 43 Terrain Correction Comparison



Smart Materials – Shape Memory Alloys



Temperature Driven Processes



The END of HYDRAULICS

KLA05 LINEAR ACTUATOR



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How it works



- You have an ASSET

- Mineral Rights or Leases
- Production
- Intellectual Property
- Flooding Problem

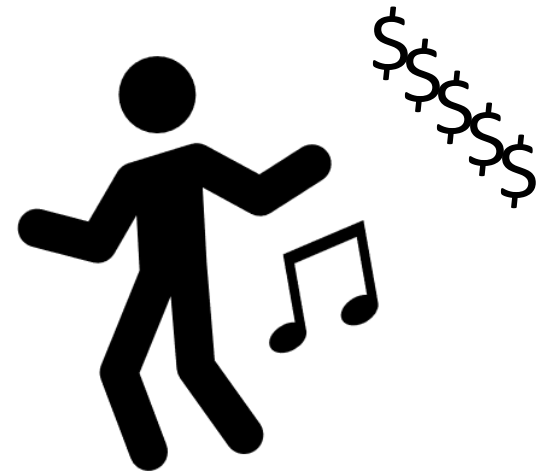
- We help MONETIZE it

- Data Acquisition
- Interpretation
- Prototype & Develop
- Mapping & Evaluation

Give us a shout. Let's talk. AND MAKE SOME MONEY\$\$\$



(281) 825 - 8443



LIFE IS GOOD – LET'S ENJOY IT!!!